

IN THE CLAIMS

1. (Canceled)

2. (Currently Amended) Receiver for detecting information symbols transmitted according to a CDMA technique, according to which CDMA technique the information symbols are spread with different spreading codes and scrambled with different scrambling codes, on the transmission side, the receiver comprising:

a plurality of despreding units (44, 45) for despreding an input data bitstream with said different spreading codes, said input data being supplied to the despreding units (44, 45) by means of a delay line (42, 43), and

a set of k descrambling units (46, 47, 48, 49) per despreding unit (44, 45), k being an integer larger than 1, respectively k descrambling units (46, 47, 48, 49) being supplied with the output signal of one despreding unit (44, 45);

whereby said k descrambling units are supplied with respective ones of k scrambling codes;

whereby the output of each despreding unit is divided into a plurality of parallel streams and each one of said parallel streams is passed to a respective set of k descrambling units.

3. (Canceled)

4. (Canceled)

5. (Currently Amended) Receiver for detecting information symbols transmitted according to a CDMA technique, according to which CDMA technique the information symbols are spread with different spreading codes and scrambled with different scrambling codes, on the transmission side, the receiver comprising:

at least one despreading unit (44, 45) for despreading an input data bitstream with said different spreading codes,

a set of k descrambling units (46, 47, 48, 49) per despreading unit (44, 45), k being an integer larger than 1, respectively k descrambling units (46, 47, 48, 49) being supplied with the output signal of one despreading unit (44, 45), and

a channel estimator (15) for generating channel estimation values,

multiplying circuits for multiplying data based on the output of a descrambling unit (46, 47, 48, 49) with the channel estimation values supplied from the channel estimator (15);

whereby said k descrambling units are supplied with respective ones of k scrambling codes;

whereby the output of each despreading unit is divided into a plurality of parallel streams and each one of said parallel streams is passed to a respective set of k descrambling units.

6. (Original) Receiver according to claim 5, characterized in that a plurality of RAKE combiner (52, 53) is provided being respectively supplied with the output of n multiplying circuits (51) associated with different despreading units (44, 45) but with descrambling units (46,

47, 48, 49) using the same descrambling code, wherein n is the number of RAKE taps and larger than 1.

7. (Original) Receiver according to claim 6, characterized in that a number k of RAKE combiner is provided, k being the number of different scrambling codes used per link and being larger than 1.

8. (Previously Presented) Mobile communications device, characterized in that it comprises a receiver according to claim 2.

9. (Previously Presented) Mobile communications device, characterized in that it is a mobile station for a CDMA transmission system and comprises a receiver according to claim 2.

10. (Canceled)

11. (Currently Amended) Method for detecting information symbols transmitted according to a CDMA technique, according to which CDMA technique the information symbols are spread with different spreading codes and scrambled with different scrambling codes, on the transmission side, the method comprising the following steps:

despreading (44, 45) an input data bitstream with said different spreading codes, said despreading including a plurality of steps, and said input data being supplied through a delay line, and

a set of k descrambling steps (46, 47, 48, 49) per despreading step (44, 45), k being an integer larger than 1, respectively k descrambling steps (46, 47, 48, 49) being supplied with the output of one despreading step (44, 45);

whereby said k descrambling steps include the use of respective ones of k scrambling codes;

whereby the output of said despreading step is divided into a plurality of parallel streams and each one of said parallel streams is processed by a respective set of k descrambling codes.

12. (Canceled)

13. (Canceled)

14. (Currently Amended) Method for detecting information symbols transmitted according to a CDMA technique, according to which CDMA technique the information symbols are spread with different spreading codes and scrambled with different scrambling codes, on the transmission side, the method comprising the following steps:

despreading (44, 45) an input data bitstream with said different spreading codes,

a set of k descrambling steps (46, 47, 48, 49) per despreading step (44, 45), k being an integer larger than 1, respectively k descrambling steps (46, 47, 48, 49) being supplied with the output of one despreading step (44, 45),

generating channel estimation values, and

multiplying data based on the output of a descrambling unit (46, 47, 48, 49) with the channel estimation values supplied from the channel estimation value generation step (15);

whereby said k descrambling steps include the use of respective ones of k scrambling codes;

whereby the output of said despreading step is divided into a plurality of parallel streams and each one of said parallel streams is processed by a respective set of k descrambling codes.

15. (Original) Method according to claim 14, characterized by , a plurality of RAKE combining steps (52, 53) respectively supplied with the output of n multiplying steps (51) associated with different despreading steps (44, 45) but with descrambling steps (46, 47, 48, 49) using the same descrambling code, wherein n is the number of RAKE taps and larger than 1.

16. (Original) Method according to claim 15, characterized in that a number k of RAKE combining steps is provided, k being the number of different scrambling codes used per link and being larger than 1.